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PTO/SB/05 (03-01)

Please type a plus sign (+) inside this box → ☐

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

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**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

|                        |                           |
|------------------------|---------------------------|
| Attorney Docket No.    | P 5340.11008              |
| First Inventor         | Peter S. Shifflett        |
| Title                  | Apparatus and Method for* |
| Express Mail Label No. | EL 916899586 US           |

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 14]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 4]
5. Oath or Declaration [Total Pages 2]
  - a. ☒ Newly executed (original or copy)
  - b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
    - i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

**ADDRESS TO:** Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - a. ☐ Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i. ☐ CD-ROM or CD-R (2 copies); or
    - ii. ☐ paper
  - c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☒ 37 CFR 3.73(b) Statement ☒ Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No. \_\_\_\_\_

Prior application information:

Examiner \_\_\_\_\_

Group Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**☐ Customer Number or Bar Code Label ☐ (Insert Customer No. or Attach bar code label here) or ☒ Correspondence address below

|         |                                  |           |              |          |              |
|---------|----------------------------------|-----------|--------------|----------|--------------|
| Name    | William A. Birdwell              |           |              |          |              |
| Address | Durando Birdwell & Janke, P.L.C. |           |              |          |              |
|         | 2929 E. Broadway Blvd.           |           |              |          |              |
| City    | Tucson                           | State     | AZ           | Zip Code | 85716        |
| Country | USA                              | Telephone | 520-881-9442 | Fax      | 520-881-9448 |

|                   |                            |                                   |         |
|-------------------|----------------------------|-----------------------------------|---------|
| Name (Print/Type) | William A. Birdwell        | Registration No. (Attorney/Agent) | 27,181  |
| Signature         | <i>William A. Birdwell</i> | Date                              | 11/9/01 |

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

\*Remotely Sensing Hydrocarbons and Other Pollutants in Vehicle Emissions

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# FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** (\$ ) 446.00

## Complete if Known

Application Number  
Filing Date  
First Named Inventor Peter S. Shifflett  
Examiner Name  
Group Art Unit  
Attorney Docket No. P 5340.11008

### METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number 02-2451  
Deposit Account Name

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments  
☒ Charge any additional fee(s) during the pendency of this application  
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

### FEE CALCULATION

#### 1. BASIC FILING FEE

| Large Entity  | Small Entity  | Fee Description        | Fee Paid |
|---------------|---------------|------------------------|----------|
| Fee Code (\$) | Fee Code (\$) |                        |          |
| 101 740       | 201 370       | Utility filing fee     | 370      |
| 106 330       | 206 165       | Design filing fee      |          |
| 107 510       | 207 255       | Plant filing fee       |          |
| 108 740       | 208 370       | Reissue filing fee     |          |
| 114 160       | 214 80        | Provisional filing fee |          |

**SUBTOTAL (1)** (\$ ) 370

#### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Extra Claims Fee from below Fee Paid  
Total Claims 24 -20\*\* = 4 x 9 = 36  
Independent Claims 3 -3\*\* = 0 x = 0  
Multiple Dependent = 0

| Large Entity  | Small Entity  | Fee Description  |
|---------------|---------------|--|
| Fee Code (\$) | Fee Code (\$) |  |
| 103 18        | 203 9         | Claims in excess of 20                                     |
| 102 84        | 202 42        | Independent claims in excess of 3                          |
| 104 280       | 204 140       | Multiple dependent claim, if not paid                      |
| 109 84        | 209 42        | ** Reissue independent claims over original patent         |
| 110 18        | 210 9         | ** Reissue claims in excess of 20 and over original patent |

**SUBTOTAL (2)** (\$ ) 36.00

\*\*or number previously paid, if greater; For Reissues, see above

### FEE CALCULATION (continued)

#### 3. ADDITIONAL FEES

| Large Entity  | Small Entity  | Fee Description  | Fee Paid |
|---------------|---------------|--|----------|
| Fee Code (\$) | Fee Code (\$) |  |          |
| 105 130       | 205 65        | Surcharge - late filing fee or oath  |          |
| 127 50        | 227 25        | Surcharge - late provisional filing fee or cover sheet                     |          |
| 139 130       | 139 130       | Non-English specification  |          |
| 147 2,520     | 147 2,520     | For filing a request for <i>ex parte</i> reexamination                     |          |
| 112 920*      | 112 920*      | Requesting publication of SIR prior to Examiner action                     |          |
| 113 1,840*    | 113 1,840*    | Requesting publication of SIR after Examiner action                        |          |
| 115 110       | 215 55        | Extension for reply within first month                                     |          |
| 116 400       | 216 200       | Extension for reply within second month                                    |          |
| 117 920       | 217 460       | Extension for reply within third month                                     |          |
| 118 1,440     | 218 720       | Extension for reply within fourth month                                    |          |
| 128 1,960     | 228 980       | Extension for reply within fifth month                                     |          |
| 119 320       | 219 160       | Notice of Appeal   |          |
| 120 320       | 220 160       | Filing a brief in support of an appeal                                     |          |
| 121 280       | 221 140       | Request for oral hearing   |          |
| 138 1,510     | 138 1,510     | Petition to institute a public use proceeding                              |          |
| 140 110       | 240 55        | Petition to revive - unavoidable   |          |
| 141 1,280     | 241 640       | Petition to revive - unintentional   |          |
| 142 1,280     | 242 640       | Utility issue fee (or reissue)   |          |
| 143 460       | 243 230       | Design issue fee   |          |
| 144 620       | 244 310       | Plant issue fee  |          |
| 122 130       | 122 130       | Petitions to the Commissioner  |          |
| 123 50        | 123 50        | Processing fee under 37 CFR 1.17(q)  |          |
| 126 180       | 126 180       | Submission of Information Disclosure Stmt                                  |          |
| 581 40        | 581 40        | Recording each patent assignment per property (times number of properties) | 40       |
| 146 740       | 246 370       | Filing a submission after final rejection (37 CFR § 1.129(a))              |          |
| 149 740       | 249 370       | For each additional invention to be examined (37 CFR § 1.129(b))           |          |
| 179 740       | 279 370       | Request for Continued Examination (RCE)                                    |          |
| 169 900       | 169 900       | Request for expedited examination of a design application                  |          |

Other fee (specify)

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)** (\$ ) 40.00

### SUBMITTED BY

Name (Print/Type) William A. Birdwell Registration No. 27,181 Telephone 520-881-9442  
Signature [Signature] (Attorney/Agent) Date 11/9/01

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

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CASE DOCKET NO.: P 5340.11008

APPLICANTS: Peter S. Shifflett, James H. Johnson and Jason K. Webster

APPLICATION TITLE: Apparatus and Method for Remotely Sensing Hydrocarbons  
and Other Pollutants in Vehicle Emissions

### CERTIFICATE OF MAILING

I hereby certify that the items listed below are being deposited with the United States Postal Service utilizing the "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service, mailing label number **EL 916899586 US**, under 37 CFR 1.10 in an envelope addressed to: BOX PATENT APPLICATION, Commissioner for Patents, Washington, D.C. 20231, on the 9<sup>th</sup> day of November, 2001.



Alice Vanicek

Enclosed are:

- ☒ [X] Itemized return postcard.
- ☒ [X] A check in the amount of \$446 to cover the filing and recordation fees.
- ☐ [ ] Provisional Application for Patent Cover Sheet
- ☒ [X] Utility Patent Application Transmittal sheet.
- ☒ [X] Fee Transmittal sheet (in duplicate).
- ☒ [X] Declaration for Utility or Design Patent Application.
- ☒ [X] Power of Attorney or Authorization of Agent.
- ☒ [X] Statement Under 37 CFR 3.37(b).
- ☒ [X] An assignment agreement and recordation cover sheet.
- ☒ [X] A specification of the invention and claims.
- ☒ [X] Four sheets of drawings.
- ☐ [ ] \_\_ photographs submitted as informal drawings for reference purposes only.
- ☐ [ ] An information disclosure statement.
- ☐ [ ] Copy of priority document.